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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,064	10/21/2004	Jin Kinoshita	018765-185	8575
21839	7590	08/22/2006	EXAMINER	
BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER

1712

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/512,064

Applicant(s)

KINOSHITA ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/21/04 IDS.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/21/04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Translation of JP2000-143981</u> . |

DETAILED ACTION

1. The Applicants' preliminary amendment filed on October 21, 2004 is acknowledged. Claims 1-7 are deleted. Claims 8-14 are added.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and **legal phraseology** often used in patent claims, such as "means" and "said," should be **avoided**. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The word "comprises" in line 1 is **improper**.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1712

4. Claims 10-11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 10 (line 2), it is not clear as to what “except a polyimide resin” refers to because the present invention require at least a polyimide.

Claim 11 recites the limitation "the thermosetting resin" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

In Claim 14 (line 2), “Claim 6” causes confusion because it does no longer exist.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 8-14 are rejected under 35 U.S.C. 102(b) as being anticipated by JP981 (JP 2000-143981).

JP981 discloses an adhesive resin comprising a polyimide obtained by reacting a polysiloxane diamine represented by formula (3) and a polyphenylene oxide diamine of formula (2)' where n can be 3 and preferably all substituents on benzene ring (including amino groups) are on the meta positions with a tetracarboxylic dianhydrides; an epoxy resin and a curing agent. ([0008]-[0013], [0023]-[0026] and [0041]-[0044]) The resin can be used in the field of electronics. ([0048]-[0049])

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP656 (JP 08-127656).

JP656 discloses an adhesive resin comprising a polyimide obtained by reacting a polyphenylene oxide diamine represented by formula (1) and a

Art Unit: 1712

polysiloxane diamine represented by formula (2) with a tetracarboxylic dianhydrides. ([0004]-[0008]) The resin can be used in the field of electronics. ([0002]) JP656 is silent on the use of a polyphenylene oxide diamine set forth in the instant claims. However, JP656's polyphenylene oxide diamine is a homolog of that of Applicants'. A *prima facie* case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) See MPEP 2144.09.

9. Claims 8-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP213 (JP 08-134213).

JP213 discloses an adhesive resin comprising a polyimide obtained by reacting a polyphenylene oxide diamine represented by formula (1) and a polysiloxane diamine represented by formula (2) with a tetracarboxylic dianhydrides. ([0005]-[0016]) The resin can be used in the field of electronics. ([0002]) JP213 is silent on the use of a polyphenylene oxide diamine set forth in

Art Unit: 1712

the instant claims. However, JP213's polyphenylene oxide diamine is a homolog of that of Applicants'. A *prima facie* case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities.

"An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) See MPEP 2144.09.

10. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP656 as applied to Claims 8-10 and 12-14 above, and further in view of Yoshida (US 5 773 509).

The difference between JP656 and the present invention is the requirement of a thermosetting resin of epoxy resin.

Yoshida teaches the use of an epoxy resin and a curing agent in a heat resistant resin composition comprising a polyimide. The motivation of using the epoxy resin and the curing agent is to afford a film adhesive which has excellent heat resistance and which can adhere at a low temperature in a short time. (col. 2, line 40 to col. 4, line 29) In light of the benefit mentioned, it would have been

Art Unit: 1712

obvious to one of ordinary skill in the art at the time of the invention was made to incorporate Yoshida's epoxy resin and curing agent into JP656's composition.

Especially, Yoshida is in the same field as that of JP656's endeavor.

11. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP213 as applied to Claims 8-10 and 12-14 above, and further in view of Yoshida (US 5 773 509).

The difference between JP213 and the present invention is the requirement of a thermosetting resin of epoxy resin.

Yoshida teaches the use of an epoxy resin and a curing agent in a heat resistant resin composition comprising a polyimide. The motivation of using the epoxy resin and the curing agent is to afford a film adhesive which has excellent heat resistance and which can adhere at a low temperature in a short time. (col. 2, line 40 to col. 4, line 29) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate Yoshida's epoxy resin and curing agent into JP213's composition. Especially, Yoshida is in the same field as that of JP213's endeavor.

Art Unit: 1712

12. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida.

Yoshida discloses an adhesive resin comprising a polyimide obtained by reacting a polysiloxane diamine represented by formula (1) and a 1,3-bis(3-aminophenoxy)benzene, 1,4-bis(4-aminophenoxy)benzene or 1,4-bis(3-aminophenoxy)benzene with a tetracarboxylic dianhydrides; an epoxy resin and a curing agent. (col. 2, line 40 to col. 4, line 29, col. 5, lines 7-26 and col. 7, lines 55-67) The resin can be used in the field of electronics. (col. 1, lines 6-35) Yoshida is silent on the use of the polyphenylene oxide diamine set forth in the instant claims. However, Yoshida's polyphenylene oxide diamine is a homolog of that of Applicants'. A *prima facie* case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) See MPEP 2144.09.


Art Unit: 1712

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp
August 16, 2006


Kuo-Liang Peng
Primary Examiner
Art Unit 1712